

**REMARKS**

Applicant has reviewed and considered the Office Action mailed on July 8, 2003, and the references cited therewith.

Claims 1, 22, 43, 67, and 74 are amended, no claims are canceled, and no claims are added; as a result, claims 1-83 are now pending in this application. The amendments to the claims are fully supported by the specification as originally filed. No new matter is introduced. The amendments are made to clarify the claims. Applicant respectfully requests reconsideration of the above-identified application in view of the amendments above and the remarks that follow.

Support for claims 1, 22, 43, and 67 is found, for example, on page 11, lines 3-10.

Support for claim 74 is found, for example, on page 18, lines 7-9.

**First §102 Rejection of the Claims**

Claims 1-3, 5, 8, 13-15-19 [sic], 22, 23, 26, 27, 28, 30, 43, 44, 47, 48, 67, 68, 71, 72, 74, 79, 80 and 82 were rejected under 35 USC § 102(b) as being anticipated by Adams (US 5,528,217). Applicant traverses these grounds for rejection.

Applicant can not find in Adams a teaching or a suggestion of a sensor control unit having a signal processor and a controller to control multiple sensors as recited in claim 1, as amended. Adam's distance ranging circuit 46, as cited by Office Action in reference to a sensor control unit, is such that "[w]hen distance ranging circuit 46 receives returned echo analog signals 54 from device 22, they are converted to digital logic signals that are outputted along with a high frequency low voltage signal, referred hereinafter as "two output signals" 53 and 55. It is noted that output signal 53 is the same signal inputted to device 22 along output line 52 as a trigger and reference signal." *See Adam, column 5, lines 14-20.* It appears that distance ranging circuit 46 passes on signals and converts signals. Applicant can not find a teaching or suggestion that distance ranging circuit 46 includes a signal processor to determine a presence of a hazard.

Further the Office Action cites Adam's warning system 26 as a separate entity from numeric display 88 and multi-color display 42 that can be coupled to warning system 26. Applicant respectfully points out that Adam's warning system 26 is a block diagram

representation of a system that can include numeric display 88 and multi-color display 42 (*See Adam, column 5, lines 14-20, and dotted box 26 of Figure 4*) and is thus not coupled to either numeric display 88 and multi-color display 42. Further, Adam's entity 26 is located in the vehicle compartment and not on a trailer. It appears that the Office Action has not provided a specific demonstration of a driver interface unit adapted for mounting to a trailer, as recited in amended claim 1.

Further, Applicant can not find in Adams a teaching or suggestion of a trailer based collision warning system having a display unit coupled to a driver vehicle interface capable of providing a visual representation of objects determined by a sensor control unit, where the trailer based collision warning system having the display unit is adapted for mounting to a trailer, as recited in amended claim 1. Adam's warning system 26 appears to be mounted in a vehicle compartment not on a trailer. *See, Adams, column 4, lines 35-52 and associated figures.*

Thus, Applicant respectfully submits that the Office Action did not make out a proper *prima facie* case of anticipation since the Adam reference does not teach each and every claim element arranged as claim 1. "Anticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*"

*Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added).

Claims 22, 43, and 67 recite elements similar to the above discussed elements of claim 1 with respect to a sensor control unit, and are also patentable over Adam for the reasons stated above and in addition to the further elements of these claims.

Applicant can not find a teaching or suggest in Adam for a trailer based visual display unit having multiple indicator lights for displaying status and parametric information associated with a trailer and a mounting to attach the trailer based visual display unit on the trailer in a manner that communicates meaningful information to a driver in a cab of a vehicle pulling the trailer as recited in claim 74, as amended. Thus, Applicant respectfully submits that Adam does not anticipate claim 74, and that claim 74 is patentable over Adam.

Applicant can not find a teaching or suggest in Adam for an adaptor capable of being coupled to an auxiliary power outlet in a vehicle where the adaptor includes a wireless receiver

for receiving information, as recited in claim 79. Thus, Applicant respectfully submits that Adam does not anticipate claim 79, and that claim 79 is patentable over Adam.

Claims 2-3, 5, 8, and 13-19, claims 23, 26-28, and 30, claims 44, 47, and 48, claims 68, 71, and 72, and claims 80 and 82 depend on claims 1, 22, 43, 67, and 79, respectively, and are patentable over Adam for the reasons stated above and additionally in view of the further elements recited in these dependent claims.

Applicant respectfully requests the withdrawal of these rejections of claims 1-3, 5, 8, 13-19, 22, 23, 26, 27, 28, 30, 43, 44, 47, 48, 67, 68, 71, 72, 74, 79, 80 and 82, and reconsideration and allowance of these claims.

Second §102 Rejection of the Claims

Claims 39-41, 69 and 73 were rejected under 35 USC § 102(b) as being anticipated by Paranjpe (US 6,339,369). Applicant traverses these grounds for rejection.

Applicant can not find a teaching or suggestion in Paranjpe of an adaptor that includes a power line carrier interface circuit to receive collision warning information superimposed on a power line, as recited in claim 19. Paranjpe recites at column 5, lines 34-54:

FIG. 2 shows details of keypad 10, base power module 20, base transceiver 40, warning indicator module 50 and base control module 60. Keypad 10 comprises a momentary-on push button switch 11, a two position switch 12 with position 14 and position 15, pulse delay circuit 16, and signal diode 17. Base power module 20 comprises power source 21, relay 26, silicon controlled rectifier (SCR) 27, N channel field effect transistor (FET) 28, pulse stretcher circuit 29, signal diode 30, switched power output 31, power-off trigger signal 33 and power-on trigger signal 34. Pulse stretcher circuit 29 includes pulse delay circuit 35, input capacitor 36 and signal diode 37. Power source 21 comprises battery 22, solar cell 23, external power jack 24, signal diodes 25, and unswitched power output 32. Solar cell 23 is an optional feature and may be omitted. Signal diodes 25 allow the base unit to operate from a plurality of sources including battery 22, solar cell 23 and external power 24. If a rechargeable battery 22 is used, solar cell 23 charges battery 22. In this manner, the need for external power 24 is obviated. External power 24 could be the cigarette lighter receptacle that is a standard feature in vehicles.

Applicant notes that base power module 20 “controls electrical power distribution.” *See Paranjpe, column 5, line 28.* Controlling electrical power distribution is distinctly different than receiving information over a power line, which deals with communication over a power line

system. Since Paranjpe apparently does not teach or suggest a power line carrier interface circuit to receive collision warning information superimposed on a power line, Paranjpe does not teach or suggest all the elements as recited in claim 39. Thus, Applicant submits that Paranjpe does not anticipate claim 39, and that claim 39 is patentable over Paranjpe.

Claims 40 and 41 depend on claim 39, and are patentable over Paranjpe for the reasons stated above and additionally in view of the further elements recited in these dependent claims.

Applicant can not find in Paranjpe a teaching or suggestion of a trailer based collision warning system adapted for mounting to a trailer as recited in amended claim 67. Applicant submits that Paranjpe does not anticipate claim 67, and that claim 67 is patentable over Paranjpe.

Claims 69 and 73 depend on claim 67, and are patentable over Paranjpe for the reasons stated above and additionally in view of the further elements recited in these dependent claims.

Applicant respectfully requests the withdrawal of these rejections of claims 39-41, 69 and 73, and reconsideration and allowance of these claims.

*First §103 Rejection of the Claims*

Claims 4, 6, 7, 29 and 75-78 were rejected under 35 USC § 103(a) as being unpatentable over Adams in view of Kam (US 6,115,918 B1). Applicant traverses these grounds for rejection.

Kam deals with an automatic warning signal system for a leading vehicle. *See, Abstract of Kam.* Applicant believes that Kam does not cure the abovementioned deficiencies of Adams with respect to claims 1 and 22.

Claims 4, 6, 7, 29 depend on claims 1 and 22, respectfully, and are patentable over Adams in view of Kam for the reasons stated above with respect to claims 1 and 22, and additionally in view of the further elements recited in these dependent claims.

Further, since Kam's automatic warning system produces "a warning vehicle signal to caution or warn the driver of a second or following vehicle," Kam does not cure the deficiencies of Adams with respect to claim 74, as amended. Thus, Applicant submits that the combination of Adams and Kam does not teach or suggest all the elements as recited in claim 74, and that the Office Action does not establish a proper *prima facie* case of obviousness with respect to claim 74.

Claims 75-78 depend on claim 74, and are patentable over Adams in view of Kam for the reasons stated above and additionally in view of the further elements recited in these dependent claims.

Applicant respectfully requests the withdrawal of these rejections of claims 4, 6, 7, 29 and 75-78, and reconsideration and allowance of these claims.

*Second §103 Rejection of the Claims*

Claims 9, 12, 24, 25, 45, 46, 70 and 81 were rejected under 35 USC § 103(a) as being unpatentable over Adams in view of Smithline (US 5,734,336). Applicant traverses these grounds for rejection.

Smithline deals with a system for preventing collisions using a cab-mounted control unit. *See Smithline, Figure 2.* Applicant believes that Smithline does not cure the abovementioned deficiencies of Adams with respect to independent claims 1, 22, 43, 67, and 79.

Claims 9 and 12, claims 24 and 25, claims 45 and 46, claim 70, and claim 81 depend on claims 1, 22, 43, 67, and 79, respectfully, and are patentable over Adams in view of Smithline for the reasons stated above with respect to claims 1, 22, 43, 67, and 79, and additionally in view of the further elements recited in these dependent claims.

Applicant respectfully requests the withdrawal of these rejections of claims 9, 12, 24, 25, 45, 46, 70 and 81, and reconsideration and allowance of these claims.

*Third §103 Rejection of the Claims*

Claims 10, 11 and 83 were rejected under 35 USC § 103(a) as being unpatentable over Adams in view of Markus (US 6,421,081 B1). Applicant traverses these grounds for rejection.

Applicant does not admit that Markus is prior art, and reserves the right to swear behind it at a later date. Nevertheless, Applicant respectfully submits that the claims are distinguishable over Markus for the reasons stated below.

Markus deals with a video device for viewing images at the rear and sides of a vehicle. *See Markus, Abstract.* Applicant believes that Markus does not cure the abovementioned deficiencies of Adams with respect to independent claims 1 and 79.

Claims 10 and 11, and claim 83 depend on claims 1 and 79, respectfully, and are patentable over Adams in view of Markus for the reasons stated above and additionally in view of the further elements recited in these dependent claims.

Applicant respectfully requests the withdrawal of these rejections of claims 10, 11 and 83, and reconsideration and allowance of these claims.

*Fourth §103 Rejection of the Claims*

Claims 20 and 21 were rejected under 35 USC § 103(a) as being unpatentable over Adams. Applicant traverses these grounds for rejection.

Applicant notes that Adams does not appear to disclose a microprocessor. Adams uses the expression microprocessor 89 in the specification, but 89 refers to a dotted line structure in Figure 4 that includes a transmitter and receiver, a distance ranging circuit, an oscillator circuit, a voltage comparator circuit and a BCD circuit. Applicant can not find a teaching or suggestion of a microprocessor as commonly known to be programmed as proffered in the Office Action.

The Examiner rejected claims 20 and 21 based on Adams. Applicant respectfully traverses the single reference rejection under 35 U.S.C. § 103 since not all of the recited elements of the claims are found in Adams. Since all the elements of the claim are not found in the reference, Applicant assumes that the Examiner is taking official notice of the missing elements. Applicant respectfully objects to the taking of official notice with a single reference obviousness rejection and, pursuant to M.P.E.P. § 2144.03, Applicant respectfully traverses the assertion of Official Notice and requests that the Examiner cite references in support of this position.

Further, claims 20 and 21 are dependent on claim 1, and are patentable over Adams for the reasons stated above with respect to claim 1, and additionally in view of the further elements recited in these dependent claims.

Applicant respectfully requests the withdrawal of these rejections of claims 20 and 21, and reconsideration and allowance of these claims.

*Fifth §103 Rejection of the Claims*

Claims 31-38 were rejected under 35 USC § 103(a) as being unpatentable over Adams in view of Paranjpe (US 6,339,369 B1). Applicant traverses these grounds for rejection.

Applicant believes that Paranjpe does not cure the abovementioned deficiencies of Adams with respect to claim 22. Claims 31-38 depend on claim 22, and are patentable over Adams in view of Paranjpe for the reasons stated above with respect to claims 1 and 22, and additionally in view of the further elements recited in these dependent claims.

Applicant respectfully requests the withdrawal of these rejections of claims 31-38, and reconsideration and allowance of these claims.

*Sixth §103 Rejection of the Claims*

Claim 42 was rejected under 35 USC § 103(a) as being unpatentable over Paranjpe in view of Adams. Applicant traverses these grounds for rejection.

Applicant believes that Paranjpe does not cure the abovementioned deficiencies of Adams with respect to claim 22. Claim 42 depends on claim 22, and is patentable over Paranjpe in view of Adams for the reasons stated above with respect to claims 1 and 22, and additionally in view of the further elements recited in these dependent claims.

Applicant respectfully requests the withdrawal of these rejections of claim 42, and reconsideration and allowance of this claim.

*Eighth §103 Rejection of the Claims*

Claims 49-57 and 69 were rejected under 35 USC § 103(a) as being unpatentable over Adams in view of Coulthard (US 5,825,286). Applicant traverses these grounds for rejection.

Coulthard deals with a system in which operational parameters such as tire pressure, wheel temperature, and vibration are sensed. *See Coulthard, Abstract.* Applicant believes that Coulthard does not cure the abovementioned deficiencies of Adams with respect to claims 43 and 67.

Claims 49-57 and claim 69 depend on claims 43 and 67, respectively, and are patentable over Adams in view of Coulthard for the reasons stated above with respect to claims 1, 43, and 67, and additionally in view of the further elements recited in these dependent claims.

Applicant respectfully requests the withdrawal of these rejections of claims 49-57 and 69, and reconsideration and allowance of these claims.

Ninth §103 Rejection of the Claims

Claims 58-62 were rejected under 35 USC § 103(a) as being unpatentable over Adams in view of Coulthard as applied to claim 55 above, and further in view of Adams in view of Paranjpe. Applicant traverses these grounds for rejection.

Applicant believes that Coulthard and Paranjpe do not cure the abovementioned deficiencies of Adams with respect to claims 1 and 43.

Claims 58-62 depend on claim 43, and is patentable over Adams in view of Coulthard in further view of Paranjpe for the reasons stated above with respect to claims 1 and 43, and additionally in view of the further elements recited in these dependent claims.

Applicant respectfully requests the withdrawal of these rejections of claims 58-62, and reconsideration and allowance of these claims.

**AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111**

Serial Number: 10/056640

Filing Date: January 25, 2002

**Title: TRAILER BASED COLLISION WARNING SYSTEM AND METHOD**

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**Conclusion**

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612-371-2157) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743

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Date 8 October 2003

By



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**CERTIFICATE UNDER 37 CFR 1.8:** The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 8 day of October, 2003.

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